

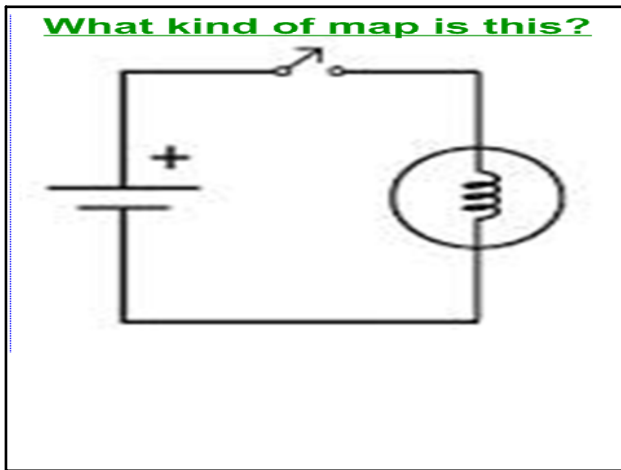
Apr 20-1:10 PM

- What areas of the world have the greatest concentration of artificial light?
North America, Europe, & Central America have the most lights. The east coast of the United States has a lot of

- Which areas of the world have the least number of lights?
Antarctica has no lights. Northern Canada has little light. Arctic has no light. Middle of Africa has little light. Hawaii has a point on two.

- What unusual patterns of light do you see?
There is more light in the northern hemisphere than in the southern hemisphere. North America and Europe are kind of close to each other and have a lot of light. Africa and South America have more light on the coasts but Africa has the least light of the two.

Apr 21-8:02 AM



Apr 20-1:18 PM

Lab Activity: How Can You Light a Bulb?
 How do you keep your team materials safe and ready to use throughout this unit?
Follow directions at all times.

Lighting a Bulb
 Using a wire, bulb, and battery light the bulb. Make drawings and write descriptions to what you find out. Try more than one way. Record any failed attempts as well as at least one successful circuit. Put a star by a successful circuit. Be sure to show the points of contact between the battery, wire, and bulb to make a successful circuit.

Circuit - a path for *(electric current)* to follow

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Apr 22-7:58 AM

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Will the bulb light no matter where you connect the wire to the battery?

Or do the wire and battery need to connect in a certain way?

Explain your ideas by telling *why* you're thinking what you are thinking.

Apr 20-1:32 PM

page 14 Explain


1. What did you have to do in order to light the bulb?
We had to make sure that the electric current had a full circle path to go from wire to bulb to both ends of the battery.
2. What happens when a short circuit occurs?
A short circuit is when the electricity finds an easier way to complete the circuit (path) and leaves out the light bulb. It can get very hot and start a fire.
3. What other ways can you light the bulb? Draw or describe them.
The battery can be turned around so the bulb is touching either the positive or the negative end.
The side of the light bulb can be touching the end of the battery and the wire touching the bottom of the bulb.
The side of the bulb can be touching the end of the battery and the wire touching the other side of the light bulb.
It does NOT work if the work if the bottom of the bulb is touching the battery and the wire is also at the bottom of the bulb and the battery. The bulb gets left out of the circuit.

Apr 21-8:00 AM


Investigating Open and Closed Circuits
 Complete each sentence with the correct vocabulary term. Then draw a picture to show each term.

A(n) Closed circuit is a complete pathway over which an electric current can flow continuously.

A(n) Open circuit is a broken pathway through which the flow of an electric current is stopped.




Closed Circuit



Open Circuit

Investigating a Short Circuit
 What causes a short circuit?
Electricity finds an easier way to complete a circuit.
 How could you make a short circuit using the wire, battery, and bulb?



Apr 22-7:59 AM

Read and Record	
Read to Find Out	Record Your Findings
Before the light bulb, what light source did people use to see at night?	Fire: Candles, Torch, Oil Lamp, Fireplace, Gas lamp. Natural light: Moon
What was Edison's first successful light bulb like?	Lasted over 40 hours. *PP* < two days
How did the light bulb change the way people live?	It made lives easier. You only have to turn on a switch.
What advice do you think Edison would give you as you work through the Lab Activities in this unit?	Never give up! Try again.

Apr 21-8:55 AM

page 16 and 17

- Draw and describe in words the difference between a closed circuit and an open circuit.
 A closed circuit lets electricity go all the way around it, so things turn on.
 An open circuit has a break in it so things are turned off.
- Use the word illuminate in a sentence about your house.
 My house is well illuminated.
- The first light bulb that Edison invented was 16 watts. You might use bulbs at home that are 75 or 100 watts. What does the number of watts tell you about a bulb?
 It tells me how bright the bulb is. Bulbs with more watts are brighter.

Apr 24-7:55 AM

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